JOHAN HJORT DATA
READ-ME

2007:

Measurements started Nov. 15, 2007 ends Dec 18, 2007.
Two cruises 071115 and 071127.

No STD1 in the runs due to a leak in the tank when it was installed
The concentrations given for STD2-4 are wrong so there were no zero and span runs

There were some instrument problems which led to intermittent crashes in the system. Thus there are frequent breaks in the data logging and the shut-down procedures where not followed by the instrument (go to sleep, std run, sleeping).

Too low licor flow on STD3 throughout the 2007 measurements (less than 10). Thus all STD3 values are measurements of leftover STD2. Since there was a leak in the STD1 gas bottle during this time this leaves only two standards – not possible to do a mV reduction.

Reduced using linear regression between STD2 and STD4. Possible due to almost no drift in these two standards during the two cruises.

2008:

On the first cruise (080124) the TSG did not work
The data logging problems from 2007 continued until mid-April
The seawater pump broke down in May/June and was replaced during ship-repairs in June

At beginning of the first cruise the STD2 tank was empty due to a very slow leak – system was run without STD2 and without zero and span. No STD2 runs until 080318 due to this leak in the gas bottle.

Zero and span was included in the run sequence from Mar. 3, 2008 when the correct concentrations for STD3-4 was included in the files.

STD2 added on Mar 16, 2008 but did not record correct concentration until Mar 17, 2008. Before then the STD2 values were very low (~6)

Starting on Mar 18, 2008 the run sequence is complete with all four standards and zero and span included.

Pressure sensor in equilibrator was replaced 080412 with a differential sensor (previous sensor was absolute).

No data recorded over summer (from 080608 until 080828) because it was not possible to test the newly installed water pump prior to starting the instrument.

No data were recorded on the 080901 cruise - unknown reason.

Notes on removed data:

On Mar 17, 2008 there is a long sequence of "go to sleep, std1, wake up, osv" – this is removed completely. During this time the licor flow was occationally very low on STD2 and STD4 leading to measurement of leftover STD1 and STD3 instead. Everything after 09:05 have been removed

Apr. 23, 2008 06:26-09:15 there was a sequence of "go to sleep, std, wake up, osv" which is removed in full.
May 19, 2008 02:26-10:19 there was a sequence of "go to sleep, std, wake up, osv" which is removed in full.

Apr. 17, 2008 09:09-09:20 gps missing – data removed

May 30, 2008 13:05-20:20 there was a sequence of "go to sleep, std, sleeping, wake up, osv" which is removed in full

May 31 21:45 – Jun. 1 05:09, 2008 there was a sequence of "go to sleep, std, sleeping, wake up, osv" which is removed in full

On May 25, 2008 there was a valco valve position error which led to STD1 and STD2 not being measured correctly. All data between this standard run and the previous was removed along with this complete standard run to minimize the error.

On the last two cruises (080412 and 080522) there are a lot of cases where the O2_temp (from the optode) is too high. This is most likely due to too low water flow through the optode house. There is no separate flow meter on this branch so I cannot check, but the overall water flow is OK (~3). I have set to NaN all data where the O2_temp is 5ºC higher than the intake temperature.

Other notes:

On January 22, 2010 after e-mail correspondence with Craig Neill a water vapour correction was added. The correction was run both before and after the other corrections, with no significant difference between these two options.
The JH_data.txt file has been corrected for water vapour after the other corrections.